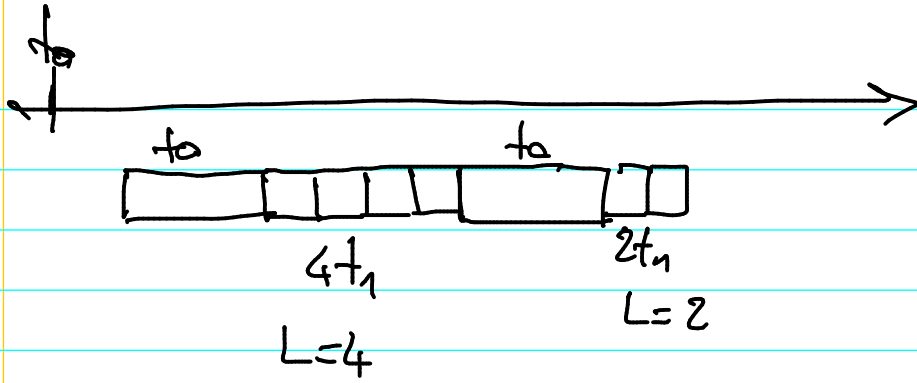
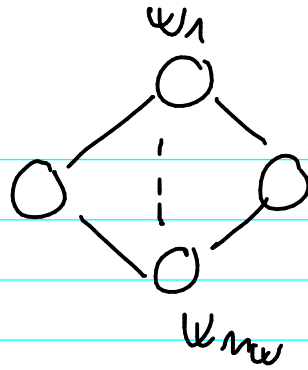


1

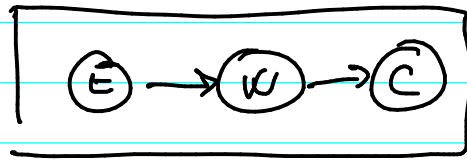


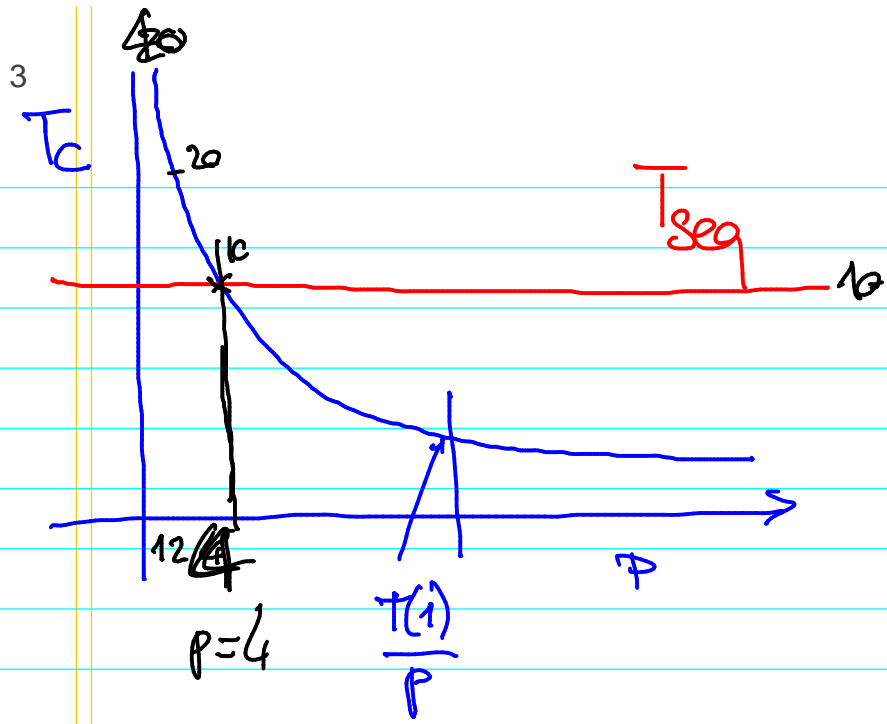
2

$T(1)$



$nw = 1$

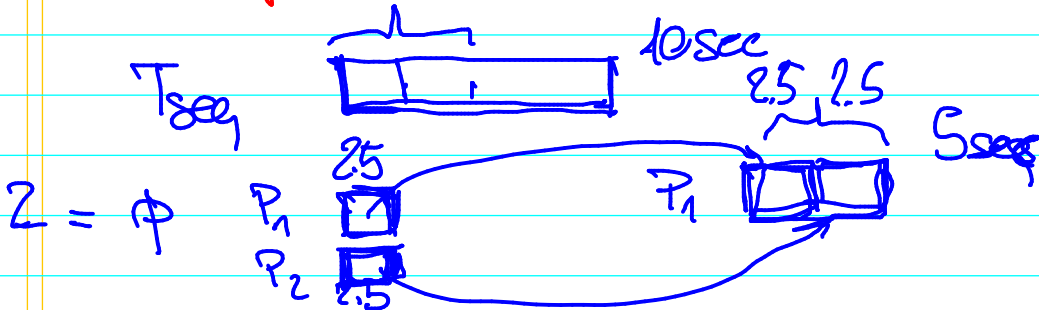




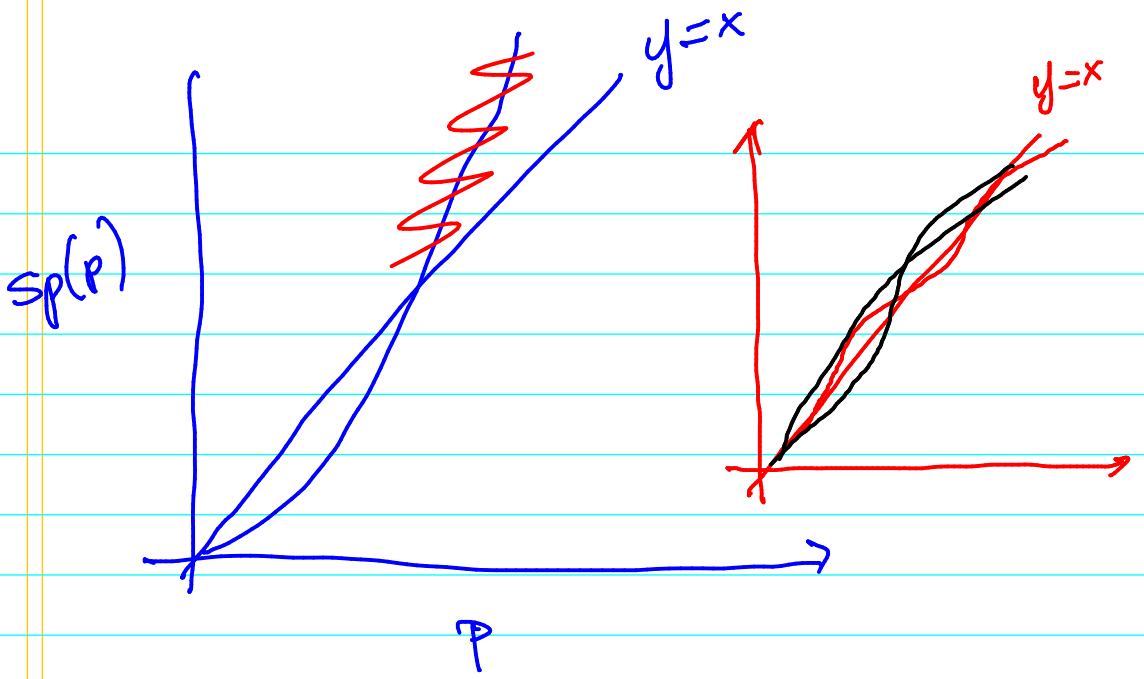
$$Sp(p) = \frac{T_{seq}}{T_c(p)} \quad Sp(p) \leq p$$

$$Sc(p) = \frac{T(1)}{T_c(p)} \quad Sc(p) \in p$$

$$\text{Speedup}(p) = 2p$$



5

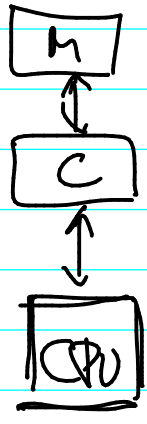


6

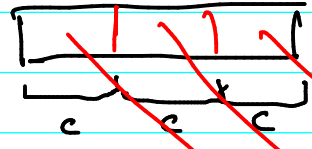


Same CPU
Same M
Shared L1
L2

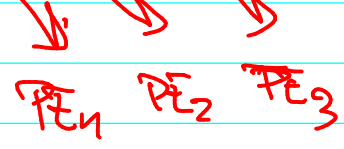
100-600 cycles
2-5 cycles



sort



$T(3)$



SUPER SCALAR SPEEDUP

$$Sp(p) \leq p$$

1. to p